

Santa Cruz Tarplant Population at the Graham Hill Road Site (Coastal Prairie Conservation Easement, 1998 through 2003)

Management Actions

Native Vegetation Network (NVN) has been managing the Coastal Prairie Conservation Easement since 1998. The Santa Cruz tarplant population at the Graham Hill Rd Site has been influenced by the removal of French broom, annual precipitation, burning, mowing, and thatch removal. Since 1998, no individuals have been observed in the two historical southern tarplant populations closer to Mosswood Ave., but tarplants have been consistently observed in the population areas southwest of Sims Rd. and northwest of Deer Path Rd.

Mowing Program. The mowing program has helped to reduce competition between Santa Cruz tarplant and non-native plant species. Mowing is conducted twice in spring (May & June) and then again the following fall. According to the Habitat Management Plan prepared by the Habitat Restoration Group in 1995, no mowing is allowed in summer so that the native plants may set seed. The tractor mounted mower leaves approximately 6 to 8 inches of standing material after mowing, which lessens damage to the other native perennials.

Thatch Removal. Field testing with thatch removal was conducted in fall 2001, fall 2002, and is planned for fall 2003. Thatch rakes with special curved tines were used to remove grass thatch in the Santa Cruz tarplant population areas (both current and historical). Thatch was removed until the grass layer was thin, partially exposing the soil surface. Preliminary data supports the idea that thatch removal has a positive effect on population size.

Burning. Large piles of pulled French broom were burned in April 1998 adjacent to the Santa Cruz tarplant population northwest of Deerpath Rd. A firebreak made with Mcclouds scalped the surface soil around the burn pile. In late spring 1998 tarplant seedlings were observed growing in the scalped areas of the firebreak. An accidental fire occurred in September 2002 that included the population area near Deerpath Rd.

Precipitation. Spring 1998 and spring 2003 have had the highest numbers of individuals. Both of these years were subject to El Nino weather patterns and had extended spring rainfall. Plants grew larger and were multibranched, and had well developed seed heads.

Census Data & Trends 1998 through 2003, Approximate Number of individuals

Overall, there has been an increasing trend in population size in the population area northwest of Deerpath Rd. in part due to thatch removal and burning.

Census Year	Population SW of Sims Rd.	Population NW of Deer Path Rd.
1998	450 to 500 plants	250 to 300 plants (burn 4-98)
1999	175 to 225 plants	210 to 270 plants
2000	125 to 150 plants	350 to 400 plants
2001	175 to 200 plants	350 to 400 plants
2002	125 to 150 plants	400 to 450 plants
2003	325 to 350 plants	550 to 600 plants (burn 9-02)

Important Question Relating to Santa Cruz Tarplant Recovery. How can we standardize the field monitoring and statistical methods to verify rates of tarplant recovery, so that land managers use consistent methods? Should CDFG establish a protocol?

Native Vegetation Network

653 Quail Drive . Santa Cruz, CA 95060 . Phone/Fax 831-425-0687 . E-mail: vegnet@cruzio.com